



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,989	02/20/2002	Masayuki Tomoyasu	33082M123	2600

7590 08/11/2004

Beveridge DeGrandi Weilacher & Young
Smith Gambrell & Russell
Intellectual Property Group
1850 M Street NW Suite 800
Washington, DC 20036

EXAMINER

CROWELL, ANNA M

ART UNIT PAPER NUMBER

1763

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/049,989	TOMOYASU, MASAYUKI	
	Examiner	Art Unit	
	Michelle Crowell	1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 3-7 and 15-22 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-14, 26 and 27 is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 23-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>02/02, 04/02, 07/02</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 3-7 and 15-22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on May 21, 2004.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claim 1-2 and 23-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Both claims 1 and 23 recite the limitation, "to the opposite surface to a surface of the first electrode". The word surface is redundant and is unclear what is meant by the repetition.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 23, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Kindaichi et al. (JP 05-198390).

Referring to Drawing 1 and Drawing 4, paragraphs [0002]-[0003], and [0008], Kindaichi et al. discloses a plasma processing system comprising: a chamber 1 for housing therein a substrate to be processed; first and second electrodes 2,3 which are provided in the chamber so as to face each other; a high frequency electric power supply 4 for supplying a high frequency electric power to the first electrode via a matching unit 17; a feeding member 6, 14, 15 for feeding the high frequency electric power from the high frequency electric power supply to the opposite surface to a surface of the first electrode 3 facing the second electrode 2; a moving mechanism 7 for moving the feeding position of the feeding member; evacuation means for maintaining the interior of the chamber in a predetermined reduced pressure state (par. [0002]); and process gas feed means for feeding a process gas into the chamber (par. [0002]), wherein the process gas is activated as plasma by the high frequency electric power to carry out a plasma processing.

A seen in Drawing 5 and paragraph [0008], Kindaichi et al. discloses a plasma processing system as set forth in claim 1, wherein the moving mechanism substantially moves the feeding position of the feeding member 14 on a circumference of a predetermined radius, which is concentric with the first electrode, on the feeding plane of the first electrode.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 1763

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 2, 23, and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakano et al. (U.S. 6,155,202).

Referring to Figures 1-4 and column 6, line 32-column 7, line 18, Nakano et al. discloses a plasma processing system comprising: a chamber 10 for housing therein a substrate 16 to be processed; first and second electrodes 4, 8 which are provided in the chamber so as to face each other; a high frequency electric power supply 1 for supplying a high frequency electric power to the first electrode 4 via a matching unit 21; a feeding member 24 for feeding the high frequency electric power from the high frequency electric power supply to the opposite surface to a surface of the first electrode 3 facing the second electrode 2 (Fig. 3, col. 6, line 49-col. 7, line 8); a moving mechanism 32 for moving the feeding position of the feeding member (col. 7, lines 4-8); evacuation means for maintaining the interior of the chamber in a predetermined reduced pressure state (col. 2, lines 66-67); and process gas feed means 17 for feeding a process gas into the chamber (col. 7, line 9-12), wherein the process gas is activated as plasma by the high frequency electric power to carry out a plasma processing.

As seen in Figure 3, Nakano et al. discloses a plasma processing system as set forth in claim 1, wherein the moving mechanism 32 substantially moves the feeding position of the feeding member 24 on a circumference of a predetermined radius, which is concentric with the first electrode 4, on the feeding plane of the first electrode.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kindaichi et al. (JP 05-198390) and Nakano et al. (U.S. 6,155,202).

The teachings of Kindaichi et al. and Nakano et al. have been discussed above.

Kindaichi et al. and Nakano et al. fail to expressly disclose that the feeding position moves at moving speed of 20 rpm or higher. However, a prima facie case of obviousness still exists because it would have been obvious to one of ordinary skill in the art to optimize the rotational speed during routine experimentation depending upon, for example, the plasma uniformity, and would not lend patentability to the instant application absent the showing of unexpected results.

Allowable Subject Matter

10. Claims 8-14, 26 and 27 are allowed.
11. The following is a statement of reasons for the indication of allowable subject matter:
- The prior art, fails either singly or in combinations, fails to anticipate or render obvious a

Art Unit: 1763

plasma processing system with a chamber, first and second electrodes, power supply, feeding means, evacuations means, process gas feed means, wherein the feeding means comprises a feeding portion, a plurality of receiving terminal portions, and a switching mechanism.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sakaguchi '343 discloses a rotating powered electrode.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle Crowell whose telephone number is (571) 272-1432.

The examiner can normally be reached on M-F (9:00 - 5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on (571) 272-1439. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AMC *ame*

*P. Hassanzadeh
Primary Examiner
AU 1763*